<u>**AMENDMENTS TO THE CLAIMS**</u>:

This listing of claims will replace all prior versions, and listings, of claims in the application.

<u>**LISTING OF CLAIMS**</u>:

**1**. (Original)  A method of enabling a user to use a bridge in either a VLAN aware mode or a VLAN unaware mode, said method being performed in a layer-2 bridge containing a plurality of ports connecting to different portions of a layer-2 network, said method comprising:

> receiving a configuration data indicating whether said bridge is to operate in said VLAN aware mode or said VLAN unaware mode;

> receiving a packet on a first port contained in said plurality of ports; and

> processing said packet according to said VLAN unaware mode if said configuration data indicates that said bridge is to operate in said VLAN unaware mode, and according to said VLAN aware mode if said configuration data indicates that said bridge is to operate in said VLAN aware mode.

**2**. (Original) The method of claim 1, wherein said configuration data indicates that said bridge is to operate in said VLAN unaware mode, wherein said processing comprises:

> determining a destination port based on a destination address contained in said packet; and

> sending said packet on said destination port.

**3**. (Original) The method of claim 2, further comprising:

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storing an address table in a content addressable memory (CAM), wherein said address table indicates a specific one of said plurality of ports on which each packet is to be forwarded; and

providing in said address table a field to store data representing a VLAN identifier.

4. (Original) The method of claim 3, wherein said determining comprises:

searching said CAM using said destination address and a pre-specified value, wherein said pre-specified value is stored in said field,

whereby said CAM can be implemented without a mask and be used in combination with both of said VLAN aware mode and said VLAN unaware mode.

5. (Original) The method of claim 4, wherein said packet is received in an untagged format, which does not contain VLAN identifier.

6. (Original) The method of claim 1, wherein said configuration data indicates that said bridge is to operate in said VLAN aware mode, wherein said packet is received in an untagged format which does not contain a VLAN tag information, said processing comprises:

setting a VLAN identifier associated with said packet to equal an identifier associated with an incoming port on which said packet is received;

searching an address table using a destination address and said VLAN identifier to determine a destination port; and

sending said packet on said destination port.

**7**. (Original) The method of claim 6, wherein said destination port is configured for forwarding in VLAN tagged format, said method further comprising inserting said tag information into said packet before sending said packet on said destination port.

**8**. (Original) The method of claim 1, wherein said configuration data indicates that said bridge is to operate in said VLAN aware mode, wherein said packet is received in a priority tagged format containing a VLAN identifier equaling zero, wherein said processing comprises:

setting a VLAN identifier associated with said packet to equal an identifier associated with an incoming port on which said packet is received;

searching an address table using a destination address and said VLAN identifier to determine a destination port; and

sending said packet on said destination port.

**9**. (Original) The method of claim 8, wherein said destination port is configured for forwarding in VLAN tagged format, said method further modifying said VLAN identifier of said packet to equal said identifier.

**10**. (Original) The method of claim 1, wherein said layer-2 network comprises Ethernet network and said layer-2 bridge comprises an Ethernet bridge.

11 to 37 (Withdrawn).

**38**. (Original) A layer-2 bridge enabling usage in either a VLAN aware mode or a VLAN unaware mode, said layer-2 bridge containing a plurality of ports connecting to different portions of a layer-2 network, said layer-2 bridge comprising:

> means for receiving a configuration data indicating whether said bridge is to operate in said VLAN aware mode or said VLAN unaware mode;

> means for receiving a packet on a first port contained in said plurality of ports; and

> means for processing said packet according to said VLAN unaware mode if said configuration data indicates that said bridge is to operate in said VLAN unaware mode, and according to said VLAN aware mode if said configuration data indicates that said bridge is to operate in said VLAN aware mode.

**39**. (Original) The layer-2 bridge of claim 38, wherein said configuration data indicates that said bridge is to operate in said VLAN unaware mode, wherein said means for processing is operable to:

> determine a destination port based on a destination address contained in said packet; and

> send said packet on said destination port.

**40**. (Original) The layer-2 bridge of claim 39, further comprising:

> means for storing an address table, wherein said address table indicates a specific one of said plurality of ports on which each packet is to be forwarded; and

means for providing in said address table a field to store data representing a VLAN identifier.

**41**. (Original) The layer-2 bridge of claim 40, wherein said address table is stored in a CAM, wherein said means for processing is operable to search said address table using said destination address and a pre-specified value, wherein said pre-specified value is stored in said field, whereby said CAM can be implemented without a mask and be used in combination with both of said VLAN aware mode and said VLAN unaware mode.

**42**. (Original) The layer-2 bridge of claim 41, wherein said packet is received in an untagged format, which does not contain VLAN identifier.

**43**. (Original) The layer-2 bridge of claim 38, wherein said configuration data indicates that said bridge is to operate in said VLAN aware mode, wherein said packet is received in an untagged format which does not contain a VLAN tag information, said means for processing is operable to:

> set a VLAN identifier associated with said packet to equal an identifier associated with an incoming port on which said packet is received;

> search an address table using a destination address and said VLAN identifier to determine a destination port; and

> send said packet on said destination port.

**44**. (Original) The layer-2 bridge of claim 43, wherein said destination port is configured for forwarding in VLAN tagged format, said layer-2 bridge further comprising means for inserting said tag information into said packet before sending said packet on said destination port.

**45**. (Original) The layer-2 bridge of claim 38, wherein said configuration data indicates that said bridge is to operate in said VLAN aware mode, wherein said packet is received in a priority tagged format containing a VLAN identifier equaling zero, wherein said means for processing is operable to:

set a VLAN identifier associated with said packet to equal an identifier associated with an incoming port on which said packet is received;

search an address table using a destination address and said VLAN identifier to determine a destination port; and

send said packet on said destination port.


**46**. (Original) The layer-2 bridge of claim 45, wherein said destination port is configured for forwarding in VLAN tagged format, said layer-2 bridge further comprising means for modifying said VLAN identifier of said packet to equal said identifier.


**47**. (Original) The layer-2 bridge of claim 38, wherein said layer-2 network comprises Ethernet network and said layer-2 bridge comprises an Ethernet bridge.


48 to 74 (Witdrawn).


**75**. (Original) A machine readable medium carrying one or more sequences of instructions for enabling a user to use a layer-2 bridge in either a VLAN aware mode or a VLAN unaware mode, said layer-2 bridge containing a plurality of ports connecting to different portions of a layer-2 network, wherein execution of

said one or more sequences of instructions by one or more processors contained in said layer-2 bridge causes said one or more processors to perform the actions of:

>receiving a configuration data indicating whether said bridge is to operate in said VLAN aware mode or said VLAN unaware mode;

>receiving a packet on a first port contained in said plurality of ports; and

>processing said packet according to said VLAN unaware mode if said configuration data indicates that said bridge is to operate in said VLAN unaware mode, and according to said VLAN aware mode if said configuration data indicates that said bridge is to operate in said VLAN aware mode.

76. (Original) The machine readable medium of claim 75, wherein said configuration data indicates that said bridge is to operate in said VLAN unaware mode, wherein said processing comprises:

>determining a destination port based on a destination address contained in said packet; and

>sending said packet on said destination port.

77. (Original) The machine readable medium of claim 76, further comprising:

>storing an address table in a content addressable memory (CAM), wherein said address table indicates a specific one of said plurality of ports on which each packet is to be forwarded; and

>providing in said address table a field to store data representing a VLAN identifier.

**78**. (Original) The machine readable medium of claim 77, wherein said determining comprises:

> searching said CAM using said destination address and a pre-specified value, wherein said pre-specified value is stored in said field,

> whereby said CAM can be implemented without a mask and be used in combination with both of said VLAN aware mode and said VLAN unaware mode.

**79**. (Original) The machine readable medium of claim 78, wherein said packet is received in an untagged format, which does not contain VLAN identifier.

**80**. (Original) The machine readable medium of claim 75, wherein said configuration data indicates that said bridge is to operate in said VLAN aware mode, wherein said packet is received in an untagged format which does not contain a VLAN tag information, said processing comprises:

> setting a VLAN identifier associated with said packet to equal an identifier associated with an incoming port on which said packet is received;

> searching an address table using a destination address and said VLAN identifier to determine a destination port; and

> sending said packet on said destination port.

**81**. (Original) The machine readable medium of claim 80, wherein said destination port is configured for forwarding in VLAN tagged format, further comprising inserting said tag information into said packet before sending said packet on said destination port.

**82**. (Original) The machine readable medium of claim 75, wherein said configuration data indicates that said bridge is to operate in said VLAN aware mode, wherein said packet is received in a priority tagged format containing a VLAN identifier equaling zero, wherein said processing comprises:

setting a VLAN identifier associated with said packet to equal an identifier associated with an incoming port on which said packet is received;

searching an address table using a destination address and said VLAN identifier to determine a destination port; and

sending said packet on said destination port.

**83**. (Original) The machine readable medium of claim 82, wherein said destination port is configured for forwarding in VLAN tagged format, further comprising modifying said VLAN identifier of said packet to equal said identifier.

**84**. (Original) The machine readable medium of claim 75, wherein said layer-2 network comprises Ethernet network and said layer-2 bridge comprises an Ethernet bridge.

85- 111 (Withdrawn).

**112**. (Original) A layer-2 bridge enabling usage in either a VLAN aware mode or a VLAN unaware mode, said layer-2 bridge containing a plurality of ports connecting to different portions of a layer-2 network, said layer-2 bridge comprising:

a medium access control (MAC) block receiving a packet on a first port contained in said plurality of ports;

a memory storing said packet;

a processing unit receiving a configuration data indicating whether said bridge is to operate in said VLAN aware mode or said VLAN unaware mode, and said processing unit processing said packet according to said VLAN unaware mode if said configuration data indicates that said bridge is to operate in said VLAN unaware mode, and according to said VLAN aware mode if said configuration data indicates that said bridge is to operate in said VLAN aware mode.

113. (Original) The layer-2 bridge of claim 112, wherein said configuration data indicates that said bridge is to operate in said VLAN unaware mode, wherein said processing unit determines a destination port based on a destination address contained in said packet, and sends said packet on said destination port.

114. (Original) The layer-2 bridge of claim 113, further comprising a content addressable memory (CAM) storing an address table, wherein said address table indicates a specific one of said plurality of ports on which each packet is to be forwarded, wherein said address table contains a field to store data representing a VLAN identifier.

115. (Original) The layer-2 bridge of claim 114, wherein said processing unit is operable to:

search said CAM using said destination address and a pre-specified value, wherein said pre-specified value is stored in said field,

whereby said CAM can be implemented without a mask and be
used in combination with both of said VLAN aware mode and said
VLAN unaware mode.

**116**. (Original) The layer-2 bridge of claim 115, wherein said packet is received
in an untagged format, which does not contain VLAN identifier.

**117**. (Original) The layer-2 bridge of claim 112, wherein said configuration data
indicates that said bridge is to operate in said VLAN aware mode, wherein said
packet is received in an untagged format which does not contain a VLAN tag
information, said processing unit being operable to:

set a VLAN identifier associated with said packet to equal an identifier
associated with an incoming port on which said packet is received;

search an address table using a destination address and said VLAN
identifier to determine a destination port; and

send said packet on said destination port.

**118**. (Original) The layer-2 bridge of claim 117, wherein said destination port is
configured for forwarding in VLAN tagged format, said layer-2 bridge wherein
processing unit is further operable to insert said tag information into said packet
before sending said packet on said destination port.

**119**. (Original) The layer-2 bridge of claim 112, wherein said configuration data
indicates that said bridge is to operate in said VLAN aware mode, wherein said
packet is received in a priority tagged format containing a VLAN identifier
equaling zero, wherein said processing unit is further operable to:

set a VLAN identifier associated with said packet to equal an identifier
associated with an incoming port on which said packet is received;

search an address table using a destination address and said VLAN
identifier to determine a destination port; and

send said packet on said destination port.

**120**. (Original) The layer-2 bridge of claim 119, wherein said destination port is configured for forwarding in VLAN tagged format, said processing unit further modifying said VLAN identifier of said packet to equal said identifier.

**121**. (Original) The layer-2 bridge of claim 112, wherein said layer-2 network comprises Ethernet network and said layer-2 bridge comprises an Ethernet bridge.

122 to 148 (Withdrawn).